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			2687	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/677,784

Applicant(s)

PALAN, DAVID B.

Examiner

Marivelisse Santiago-Cordero

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The references cited in the Information Disclosure Statement (IDS) filed on 10/02/03 and 04/07/05 have been considered.

### ***Specification***

2. The disclosure is objected to because of the following informalities: the term "cable head-end office 34" (page 11, last line) should be replaced with --cable head-end office 36--.

Appropriate correction is required.

### ***Claim Objections***

3. Claims 20 and 23 are objected to because of the following informalities: the term "the public switched telephone network" should be replaced with --a public switched telephone network--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 22-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 22, the limitation "providing multiple wireless communication devices at the *first* company's facilities, each wireless communication device being configured to register on the RAN" is unclear, since it was stated at the beginning of the claim that a second telecommunications company operates the RAN; therefore, it is unclear how the multiple

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wireless communication devices are at the first company's facilities, if they have to register on the RAN, which belong to the second company. It is noted that changing "first" into --second-- (line 6 of the claim), to more clearly distinguish what the companies encompass, would overcome this rejection.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-9, 14-21, and 28-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (hereinafter "Kim"; WO 03/024071; cited in IDS).

Regarding claim 1, Kim discloses a method for use of local loop telephone lines that extend between a telephone company switch and multiple different customer premises, including a first local loop telephone line extending between the telephone company switch and a first customer premises (Fig. 1), and a second local loop telephone line extending between the telephone company switch and a second customer premises (Fig. 1), wherein the telephone company switch provides connectivity with a transport network (Fig. 1), the method comprising the following steps: interfacing each of the local loop telephone lines with a respective wireless transceiver between the telephone company switch and the customer premises to which the local loop telephone line extends (Fig. 1, reference numerals 10a-10n); and operating each wireless transceiver to communicate with a wireless access network (Fig. 1, reference numeral 300) that

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provides connectivity with the transport network (Fig. 1, reference numeral 200), so as to communicatively connect each local loop telephone line with the transport network without use of the telephone company switch (Fig. 1), whereby (i) communications then flow between the first customer premises (Fig. 1, reference numeral 1a) and the transport network (Fig. 1, reference numeral 200) via a first communication path comprising the first local loop telephone line (Fig. 1, reference numeral 5), a first wireless transceiver (Fig. 1, reference numeral 10a), and the wireless access network (Fig. 1, reference numeral 300), and (ii) communications then flow between the second customer premises (Fig. 1, reference numeral 1b) and the transport network (Fig. 1, reference numeral 200) via a second communication path comprising the second local loop telephone line (Fig. 1, reference numeral 5), a second wireless transceiver (Fig. 1, reference numeral 10b), and the wireless access network (Fig. 1, reference numeral 300).

Regarding claim 2, Kim discloses the method of claim 1, wherein the wireless access network comprises a cellular telephone system having a base transceiver station (Fig. 1, reference numeral 310), a base station controller (Fig. 1, reference numeral 330), and a mobile switching center (Fig. 1, reference numeral 350) connected with the transport network (Fig. 1, reference numeral 200).

Regarding claim 3, Kim discloses the method of claim 2, further comprising: arranging each of the wireless transceivers to operate under a respective directory number in the cellular telephone system (page 3, 2<sup>nd</sup> paragraph).

Regarding claim 4, Kim discloses the method of claim 3, wherein arranging each of the wireless transceivers to operate under a respective directory number in the cellular telephone system comprises: arranging a given wireless transceiver to operate under a directory number

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that is assigned to the local loop with which the given wireless transceiver is being interfaced (Fig. 1; page 12, last paragraph; page 14, 2<sup>nd</sup> paragraph).

Regarding claim 5, Kim discloses the method of claim 1, wherein each wireless transceiver operates under a respective directory number (page 3, 2<sup>nd</sup> paragraph), whereby a call placed via the transport network to a given directory number is routed to the wireless access network (Fig. 1; page 12, last paragraph), via the wireless network to a wireless transceiver operating under the given directory number (Fig. 1; page 12, last paragraph), and in turn via a given local loop telephone line to a given customer premises (Fig. 1; page 12, last paragraph; page 14, 2<sup>nd</sup> and last paragraphs).

Regarding claim 6, Kim discloses the method of claim 5, further comprising: assigning equipment at the given customer premises to operate under the given directory number (Fig. 1, reference numerals 1a-1n).

Regarding claim 7, Kim discloses the method of claim 1, wherein interfacing each local loop telephone line with a respective wireless transceiver comprises: statically correlating the local loop telephone line with the respective wireless transceiver (from page 13, 3<sup>rd</sup> paragraph through page 14, 2<sup>nd</sup> paragraph).

Regarding claim 8, Kim discloses the method of claim 1, wherein interfacing each local loop telephone line with a respective wireless transceiver comprises: dynamically correlating the local loop telephone line with the respective wireless transceiver (page 13, 2<sup>nd</sup> paragraph).

Regarding claim 9, Kim discloses The method of claim 1, wherein the telephone company switch resides at a telephone company central office, the method further comprising:

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carrying out the interfacing function at the telephone company central office (Fig. 1, reference numeral 100).

Regarding claim 14, Kim discloses the method of claim 1, further comprising: concurrently (i) operating the first wireless transceiver to pass communications between the first customer premises and the transport network and (ii) operating the second wireless transceiver to pass communications between the second customer premises and the transport network (page 15, 4<sup>th</sup>-last paragraph).

Regarding claim 15, Kim discloses the method of claim 1, wherein interfacing each local loop telephone line with a respective wireless transceiver comprises: translating between (i) local loop signaling on the local loop telephone line and (ii) wireless-access-network signaling communicated between the respective wireless transceiver and the wireless access network (Fig. 1; from page 14, 2<sup>nd</sup> paragraph through page 15, 1<sup>st</sup> paragraph; page 20, 1<sup>st</sup> paragraph).

Regarding claim 16, Kim discloses the method of claim 15, wherein translating between local loop signaling and wireless-access-network signaling comprises translating between signaling to facilitate at least one enhanced telephone service selected from the group consisting of: caller-ID; call-waiting; conference calling; and message-waiting indication (Fig. 1; from page 14, 2<sup>nd</sup> paragraph through page 15, 1<sup>st</sup> paragraph).

Regarding claim 17, Kim discloses the method of claim 15, wherein interfacing each local loop telephone line with a respective wireless transceiver further comprises: emulating a local loop on the local loop telephone line (Fig. 1; from page 14, 2<sup>nd</sup> paragraph through page 15, 1<sup>st</sup> paragraph).

Regarding claim 18, Kim discloses the method of claim 15, wherein emulating a local loop comprises performing functions selected from the group consisting of: detecting an off-hook event; delivering a dial tone; detecting dialed digits; delivering a ring signal; delivering a busy signal; and detecting an on-hook event (Fig. 1; from page 14, 2<sup>nd</sup> paragraph through page 15, 1<sup>st</sup> paragraph).

Regarding claim 19, Kim discloses the method of claim 15, wherein interfacing each local loop telephone line with a respective wireless transceiver further comprises: receiving outbound voice communications from the local loop telephone line and passing the outbound voice communications to the respective wireless transceiver for transmission via the wireless access network to the transport network (Figs. 1 and 4; page 15, 4<sup>th</sup> paragraph); and receiving inbound voice communications that the respective wireless transceiver receives from the transport network via the wireless access network (Fig. 1; page 12, last paragraph), and passing the inbound voice communications to the local loop telephone line for transmission to the customer premises to which the local loop telephone line extends (from page 14, last paragraph through page 15, 1<sup>st</sup> paragraph).

Regarding claim 20, Kim discloses the method of claim 1, wherein the transport network comprises the public switched telephone network (Fig. 1, reference 200).

Regarding claim 21, Kim discloses the method of claim 1, further comprising carrying out the steps at a telephone company central office (Fig. 1, reference 100).

Regarding claim 28, Kim discloses a system (Fig. 1) comprising: a telephone line interface (Fig. 1, reference numeral 30) comprising multiple ports configured to connect with telephone lines (Fig. 1, reference numeral 5) extending to multiple different customer premises



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locations (Fig. 1, reference numeral 1a-1n), including a first port configured to connect with a first telephone line extending to a first customer premises location and a second port configured to connect with a second telephone line extending to a second customer premises location (Fig. 1, reference numeral 30; note the customer premises 1a-1n); a radio access network (RAN) interface (Fig. 1, reference numeral 10) communicatively linked with the telephone line interface (Fig. 1), the RAN interface comprising multiple RAN clients (Fig. 1, reference numeral 10a-10n) each configured to register on a RAN under a respective client identifier and to then operate under the respective client identifier when placing and receiving voice calls on a transport network via the RAN (Fig. 1, reference numeral 10a-10n; page 3, 2<sup>nd</sup> paragraph; page 12, last paragraph); call-interface logic for bridging multiple voice calls concurrently between the RAN interface and the telephone line interface (Fig. 1, reference numerals 21-25), so as to extend at least (i) a first voice call between the first customer premises location and the transport network via the first RAN client (Figs. 1 and 6) and (ii) a second voice call between the second customer premises location and the transport network via the second RAN client (Figs. 1 and 6).

Regarding claim 29, Kim discloses the system of claim 28, further comprising local loop emulation logic for emulating a local loop respectively on each telephone line (Fig. 1; page 10, last paragraph).

Regarding claim 30, Kim discloses the system of claim 28, integrated as a single apparatus (Fig. 1, reference numeral 100).

Regarding claim 31, Kim discloses a telecommunications system (Fig. 1) comprising: a telephone line interface (Fig. 1, reference numeral 30) configured to connect with a plurality of telephone lines (Fig. 1, reference numeral 5) that extend to respective customer premises

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locations (Fig. 1, reference numeral 1a-1n), wherein the telephone line interface emulates a local loop respectively on each telephone line (Fig. 1; page 10, last paragraph); a radio access network (RAN) interface (Fig. 1, reference numeral 10) communicatively linked with the telephone line interface (Fig. 1), the RAN interface comprising multiple RAN clients (Fig. 1, reference numeral 10a-10n) each configured to register on a RAN under a respective client identifier and to then operate under the respective client identifier to place and receive voice calls on a transport network (Fig. 1, reference numeral 200) via the RAN (Fig. 1, reference numeral 300; page 3, 2<sup>nd</sup> paragraph; page 12, last paragraph); and logic operative to bridge the RAN clients with the telephone lines (Fig. 1, reference numerals 21-25), so that voice calls from customer premises locations extend via the RAN to the transport network (Figs. 1 and 6) and voice calls from the transport network extend via the telephone lines to the customer premises locations (Figs. 1 and 5).

Regarding claim 32, Kim discloses the telecommunications system of claim 31, wherein at least a portion of the logic resides in a component selected from the group consisting of (i) a controller communicatively linked with both the telephone line interface and the RAN interface (Fig. 1, reference numeral 21), (ii) the telephone line interface (Fig. 1, reference numeral 30) and (iii) the RAN interface (Fig. 1, reference numeral 10).

Regarding claim 33, Kim discloses the telecommunications system of claim 31, wherein the system is located at a telephone company central office (Fig. 1, reference numeral 100).

Regarding claim 34, Kim discloses the telecommunications system of claim 31, integrated as a single apparatus (Fig. 1, reference numeral 100).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Applicant's admitted prior art.

Regarding claim 10, Kim discloses the method of claim 1 (see above) wherein each local loop telephone line is operatively linked with a subscriber line interface circuit (page 15, 6th paragraph; note that Kim discloses that the control part perceives when, among other things, the telephones are off-hooked). Kim fails to disclose wherein each local loop telephone line is operatively linked with a respective subscriber line interface circuit, the method further comprising: carrying out the interfacing function, with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the customer premises to which the given local loop telephone line extends.

However, Applicant's admitted prior art discloses wherein each local loop telephone line is operatively linked with a respective subscriber line interface circuit (Fig. 1), the method further comprising: carrying out the interfacing function, with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the customer premises to which the given local loop telephone line extends (Fig. 1; Description of Related Art: page 3, lines 18-23).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to carry out the interfacing function of Kim with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the customer premises to which the given local loop telephone line extends as suggested by Applicant's admitted prior art.

One of ordinary skill in this art would have been motivated to carry out the interfacing function of Kim with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the customer premises to which the given local loop telephone line extends because the subscriber line interface circuit could sit at any point along the telephone line (Applicant's admitted prior art; page 3, lines 18-23).

Regarding claim 11, Kim discloses the method of claim 1 (see above) wherein each local loop telephone line is operatively linked with a subscriber line interface circuit (page 15, 6th paragraph; note that Kim discloses that the control part perceives when, among other things, the telephones are off-hooked). Kim fails to disclose wherein each local loop telephone line is operatively linked with a respective subscriber line interface circuit between the telephone

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company switch and the customer premises to which the local loop telephone line extends, the method further comprising: carrying out the interfacing function, with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the telephone company central office.

However, Applicant's admitted prior art discloses wherein each local loop telephone line is operatively linked with a respective subscriber line interface circuit between the telephone company switch and the customer premises to which the local loop telephone line extends (Fig. 1), the method further comprising: carrying out the interfacing function, with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the telephone company central office (Fig. 1; Description of Related Art: page 3, lines 18-23).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to carry out the interfacing function of Kim with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the telephone company central office as suggested by Applicant's admitted prior art.

One of ordinary skill in this art would have been motivated to carry out the interfacing function with respect to a given local loop telephone line, at a point between (i) the subscriber line interface circuit with which the given local loop telephone line is operatively linked and (ii) the telephone company central office because the subscriber line interface circuit could sit at any point along the telephone line (Applicant's admitted prior art; page 3, lines 18-23).

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Regarding claim 12, Kim discloses the method of claim 1 (see above). Kim fails to disclose further comprising: carrying out the interfacing function, with respect to a given local loop telephone line, at a concentrator that sits between the telephone company switch and the customer premises to which the given local loop telephone line extends.

However, Applicant's admitted prior art discloses carrying out the interfacing function, with respect to a given local loop telephone line, at a concentrator that sits between the telephone company switch and the customer premises to which the given local loop telephone line extends (Fig. 2A; Description of Related Art: page 3, lines 2-4).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to carry out the interfacing function of Kim with respect to a given local loop telephone line, at a concentrator that sits between the telephone company switch and the customer premises to which the given local loop telephone line extends as suggested by Applicant's admitted prior art.

One of ordinary skill in this art would have been motivated to carry out the interfacing function with respect to a given local loop telephone line, at a concentrator that sits between the telephone company switch and the customer premises to which the given local loop telephone line extends because it can digitize voice communications coming from a customer premises and to combine the digitized voice communications with voice communications from other customer premises and vice versa for communications coming from the central office (Applicant's description of Prior Art Fig. 2A: page 11, lines 16-19).

Regarding claim 13, Kim discloses the method of claim 1 (see above). Kim fails to disclose further comprising: carrying out the interfacing function, with respect to a given local

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loop telephone line, at a cable head-end between the telephone company switch and the customer premises to which the given local loop telephone line extends.

However, Applicant's admitted prior art discloses carrying out the interfacing function, with respect to a given local loop telephone line, at a cable head-end between the telephone company switch and the customer premises to which the given local loop telephone line extends (Fig. 2B: Description of Related Art: page 3, lines 5-7).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to carry out the interfacing function of Kim with respect to a given local loop telephone line, at a cable head-end between the telephone company switch and the customer premises to which the given local loop telephone line extends as suggested by Applicant's admitted prior art.

One of ordinary skill in this art would have been motivated to carry out the interfacing function with respect to a given local loop telephone line, at a cable head-end between the telephone company switch and the customer premises to which the given local loop telephone line extends because it allows the customer premises to receive telephone service over the same coaxial cable that delivers cable-television service to the premises (Applicant's description of Prior Art Fig. 2B: page 12, lines 2-3).

11. Claims 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Wu et al. (hereinafter "Wu"; Pub. No.: US 2003/0035525).

Regarding claim 22, Kim discloses a method comprising: providing multiple wireless communication devices at the first company's facilities (Fig. 1; reference numerals 10a-10n), each wireless communication device being configured to register on the RAN (Fig. 1, reference

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numeral 300) and to place and receive calls on the transport network (Fig. 1, reference numeral 200) via the RAN (Fig. 1; page 12, last paragraph); and interfacing (Fig. 1, reference numerals 21-40) the multiple wireless communication devices (Fig. 1; reference numerals 10a-10n) with the local loop telephone lines at the first company's facilities (Fig. 1; reference numeral 5), so as to concurrently extend multiple calls between the local loop telephone lines and the transport network via a communication path comprising the wireless communication devices and the RAN (Fig. 1; page 14, 2<sup>nd</sup> paragraph).

Kim fails to disclose it in a system comprising a first telecommunications company that operates facilities for communicatively connecting local loop telephone lines with a transport network, and a second telecommunications company that operates a radio access network (RAN) for communicatively connecting wireless communication devices with the transport network.

However, Wu discloses a first telecommunications company that operates facilities for communicatively connecting local loop telephone lines with a transport network, and a second telecommunications company that operates a radio access network (RAN) for communicatively connecting wireless communication devices with the transport network (page 1, paragraphs [0004] and [0006]-[0009]).

Therefore, it would have been obvious to one of ordinary skill in this art at the time of invention by applicant to incorporate the method of Kim in a system comprising a first telecommunications company that operates facilities for communicatively connecting local loop telephone lines with a transport network, and a second telecommunications company that operates a radio access network (RAN) for communicatively connecting wireless communication devices with the transport network as suggested by Wu.



One of ordinary skill in this art would have been motivated to incorporate the method in a system comprising a first telecommunications company that operates facilities for communicatively connecting local loop telephone lines with a transport network, and a second telecommunications company that operates a radio access network (RAN) for communicatively connecting wireless communication devices with the transport network because users can select a wired or wireless company as the communication medium according to factors such as the telephone rate (Wu: page 1, paragraph [0004]).

Regarding claim 23, in the obvious combination, Kim discloses wherein the transport network comprises a public switched telephone network (Fig. 1, reference 200).

Regarding claim 24, in the obvious combination, Kim discloses wherein each of the wireless devices operates under a respective unique directory number in the RAN (page 13, 1<sup>st</sup> paragraph).

Regarding claim 25, Kim in combination with Wu fail to disclose further comprising: the second company paying the first company for access to the local loop telephone lines.

However, it would have been obvious to one of ordinary skill in this art at the time the invention was made to pay the first company for access to the local loop telephone lines since it was well-known in the art that agreements between wired and wireless companies are held in order for wireless customers to reach wired telephones.

Regarding claim 26, in the obvious combination, Kim discloses wherein interfacing the multiple wireless communication devices with the local loop telephone lines at the first company's facilities comprises: translating between (i) local loop signaling on the local loop telephone lines and (ii) RAN signaling communicated between the wireless communication

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devices and the RAN (Fig. 1; from page 14, 2<sup>nd</sup> paragraph through page 15, 1<sup>st</sup> paragraph; page 20, 1<sup>st</sup> paragraph).

Regarding claim 27, in the obvious combination, Kim discloses wherein interfacing the multiple wireless communication devices with the local loop telephone lines at the first company's facilities further comprises: receiving outbound voice communications from the local loop telephone lines and passing the outbound voice communications to the wireless communication devices for transmission via the RAN to the transport network (Figs. 1 and 4; page 15, 4<sup>th</sup> paragraph); and receiving inbound voice communications that the wireless communication devices receive from the transport network via the RAN (Fig. 1; page 12, last paragraph), and passing the inbound voice communications to the local loop telephone lines (from page 14, last paragraph through page 15, 1<sup>st</sup> paragraph).

### *Conclusion*

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bell (Patent No.: 6,745,059) discloses interfacing local loop lines with a wireless transceiver for reaching a transport network; Oshigiri (Patent No.: 6,952,579), Williams et al. (Patent No.: 5,475,735), and Imai et al. (Patent No.: 6,219,525) disclose wireless local loop access and mobility.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marivelisse Santiago-Cordero whose telephone number is (571) 272-7839. The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 11/2/05  
ELISEO RAMOS-FELICIANO  
PATENT EXAMINER